Northwest Power and Conservation Council

June 1, 2006

MEMORANDUM

TO: Council members

FROM: Jim Ruff, Manager, Mainstem Passage and River Operations

SUBJECT: NOAA Fisheries Service presentation on adult fish conversion rate analysis through Columbia and Snake rivers

Ritchie Graves, who is acting FCRPS Branch Chief in the Hydropower Division of NOAA Fisheries Service (NOAA Fisheries), will present spreadsheet analyses of adult salmon and steelhead conversion rates, i.e., estimated minimum survivals, through the following mainstem Columbia and Snake river reaches: a) from Bonneville Dam to McNary Dam; b) from McNary to Lower Granite Dam; and c) from McNary to Wells Dam. These are, in part, the same analyses that were presented to the FCRPS BiOp remand Policy Work Group last month. The analyses are based on adult PIT-tag detections of adult fish passing these mainstem projects adjusted with estimates of in-river harvest and straying rates.

With the installation of adult fish PIT-tag detectors at key mainstem dams since 2000, coupled with the large number of fish that are now PIT-tagged as juveniles, adequate numbers of known-origin PIT-tagged fish are returning to the Columbia River as adults to enable estimates of adult conversion rates. NOAA Fisheries is discussing the use of this, or a similar methodology, as the primary means of estimating adult survival rates in the remanded FCRPS BiOp, which is due to be completed in February 2007. There are pros and cons of using PIT-tag vs. radio tag data to estimate adult survival rates. Pros include eliminating the need to handle adults and obtaining the necessary information faster without the need for specific adult passage studies (lower costs).

In comparison, NOAA Fisheries relied heavily on adult fish radio tracking studies from 1996-98 and 2000-2002 to estimate adult passage loss of the various listed salmon and steelhead species through the FCRPS projects in both its 2000 and 2004 FCRPS biological opinions (see Table 5.2 on page 5-33 and Appendix D of the 2004 FCRPS BiOp). Historically, NOAA Fisheries considered the unaccounted-for adult loss estimates calculated from radio tag studies to be more representative of the mortality rates associated with passage through the FCRPS projects than adult loss estimates based on a comparison of simple adult counts between dams.

851 S.W. Sixth Avenue, Suite 1100
Portland, Oregon 97204-1348
www.nwcouncil.org

Steve Crow
Executive Director

503-222-5161
800-452-5161
Fax: 503-820-2370